



Situation specific training: Del Potro's backhand volley.

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ABSTRACT

Being prepared for the stresses on the muscular system during tennis can improve our performance and in particular can help with the prevention of injuries whilst playing. The present article will use sequence photos to help in designing the appropriate exercises to prepare for a specific shot. The three exercises selected are tennis-specific and will aid primarily, but not exclusively, the high backhand volley.

Key words: Backhand volley, Conditioning, Situation-specific.

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INTRODUCTION

Play tennis to get fit, or get fit to play tennis? We get this question quite often and the answer is "yes" to both. However, for the purpose of this article we will focus on getting fit to play tennis. Being prepared for the stresses on the muscular system in particular can help in the prevention of injuries while playing. We will use sequence photos to help in designing the appropriate exercises to prepare for a specific shot. As we look at a sequence of Juan Martin Del Potro hitting a high backhand volley, we can look at his stroke technique. Understanding proper stroke technique can help us to enhance our own strokes. In addition, we will look at three exercises to help us prepare physically for this type of shot. The three exercises selected are tennis-specific and will help not only improve our performance but also assist in staying injury free.

In this photo we see Del Potro just coming out of his split step. Notice that he has already recognized that the ball is coming to the backhand side, so that his turn toward that side has already been initiated. His upper body is relaxed with the racket head up and well in front of the body. The left hip has already turned to the direction that he is planning on moving and his knees are slightly flexed to allow him to push off in the direction of the ball.

PHOTO SEQUENCE

Photo #1



Photo #2



The unit turn has been completed meaning that he doesn't just bring the racket back, but the whole upper body has rotated to his left. The non-dominant arm has assisted in this rotation and is still touching the throat of the racket. The knees are almost fully extended because he recognizes the height of the incoming ball. The dominant arm (racket arm) is up high with the upper arm parallel to the ground and the elbow bent at 90

degrees. This will allow him to hit a powerful volley with depth. His eyes stay focused on the ball.

Photo #3

Del Potro is just about to make contact with the ball and shows perfect balance and concentration. Due to the height of the ball, he is off the ground yet in control of his body. His eyes are still completely focused on the ball while his racket arm is now fully extended with a firm grip. His body is still sideways to the net allowing for a proper swing path in the direction of his intended target.



Photo #4



In the initial phase of the follow through, we can see terrific extension in both the racket arm as well as the legs. It is interesting to note that because he is in the air, we see the left leg moving in the opposite direction of the racket arm. If you remember from your high school physics class, that is because to every action there is an equal and opposite reaction (Newton's 3rd law of motion). The position of the head shows us that his body is still very balanced throughout this stroke.

Photo #5

Del Potro has now completed the follow through and is absorbing the landing by bending the right leg. He has hit a forceful volley as can be seen by the length of his follow through as well as the action of the left arm (see Newton's 3rd

law above). His upper body is almost completely perpendicular to the court indicating excellent balance.



Photo #6

The backhand volley stroke has now been completed and Del Potro is recovering toward the middle service line. During his split step, we can see the foot of the right leg already pointing in that direction since he anticipates having to cover more of the deuce court. The left hand has been brought back to the throat of the racket and the racket head is above the wrist which will allow for an efficient unit turn for next stroke.



Figure 1. Complete shot sequence.

EXERCISES

The following exercises are designed specifically for tennis and will physically prepare a player for a better execution of the high back hand volley. As previously noted, the adoption of these exercises will also contribute to injury prevention and overall physical conditioning.

One-arm high to low rotation (aka one-arm chop)



Figure 2. Starting position.

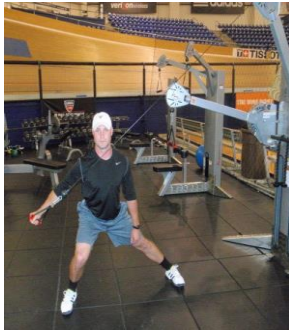


Figure 3. Finishing position.

This exercise can be performed using a cable pulley machine in a gym or using elastic tubing. You will start with the cable (or tubing) above shoulder height. You will reach across your body with your right hand and grab the cable. From this start position you will contract your core muscles (lower back and abdominals) and slowly pull with your shoulder back across your body at a 45 degree angle. This exercise develops core strength and stabilization as well as strength in the important muscles of the upper back and shoulder.

Lunge with tubing hip extension

This is a complex movement which works on the muscles and movements of the lower body and core seen specifically in photos 4 and 5. You will stand 3-4 feet away, facing the cable machine in the gym (or elasting tubing tied against a fence). Connect the cable (or tubing) to your right foot/ankle. Perform a lunge motion on your left leg while simultaneously performing a hip extension movement with your right leg

against the resistance provided by the tubing. Repeat this motion on both legs.



Figure 4. Lunge extension starting position.



Figure 5. Lunge extension finishing position.

Explosive medicine ball high-to-low throw



Figure 6. Starting position for high to low medicine ball throw.

This is an explosive exercise for the core and upper body. Using a relatively light medicine ball (3-8lbs) your start position will be 5ft away from a wall, in a keeling lunge position (right foot forward) parallel to the wall. The medicine ball will be held above your left shoulder with arms straight. From this position you will forcefully release the medicine ball across your body into the ground. This movement develops power in your hips all the way through your arms in a high-to-low rotational direction.

Muscles involved:

Lower body – Gluteals, Quadriceps, Soleus, Gastrocnemius
Mid section – Abdominals, Obliques, Back Extensors

Upper body – Serratus Anterior, Infraspinatus, Teres Minor,
Posterior Deltoid, Rhomboid, Trapezius, Triceps, Wrist
extensors

RECOMMENDED ITF TENNIS ACADEMY CONTENT (CLICK BELOW)



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